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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,084	07/13/2005	Weihong Zheng	104300-2	9772

27387 7590 12/26/2007  
NORRIS, MCLAUGHLIN & MARCUS, P.A.  
875 THIRD AVE  
18TH FLOOR  
NEW YORK, NY 10022

EXAMINER	
ALI, FARHAD	

ART UNIT	PAPER NUMBER
2146	

MAIL DATE	DELIVERY MODE
12/26/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/542,084

**Applicant(s)**

ZHENG ET AL.

**Examiner**

Farhad Ali

**Art Unit**

2146

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 05 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2 and 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Zadesky et al. (US 7,046,230 B2) in view of Lin (US 2006/0075151 A1), and further in view of Wright et al. (US 7,103,381 B1).
3. With regard to claim 1 Zadesky et al. discloses a media player comprising of a microprocessor, ROM memory, and an amplifier (Column 5 Line 32-36). Zadesky also discloses a USB interface (Column 8 Line 42-44), a headphone jack for audio output (Column 8 Line 31-34), and a LCD display (Column 5 Line 50).

Zadesky does not disclose flash memory or a switch integrated circuit for collinear transmission of USB/Audio output.

Lin et al. discloses an audio player that can utilize flash memory (Paragraph 27) as a primary storage device.

Wright et al. teaches a single relay integrated circuit for automatically switching between a USB signal and audio signal are implemented over a shared conductor (Column 3 Line 31-39).

It would have been obvious at the time of the invention to one of ordinary skill in the art to modify the media player disclosed by Zadesky to utilize flash memory and a switch integrated circuit for collinear transmission of USB/Audio output. It is obvious to combine the inventions, as flash memory is a commonly known alternative for storing data, and a switch integrated circuit for collinear transmission of USB/audio output would provide a added convenience to the consumer of having a single interface to interact with, as well as improving the overall visual appeal of the media player itself by reducing visible connectors.

***Allowable Subject Matter***

4. Claim 2 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. Claim 3 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed on October 5<sup>th</sup> 2007 have been fully considered but they are not persuasive

**Applicant argues on page 6, “although Wright et al discloses a switching circuit in which USB and audio signals share conductors, Wright et al does not teach or suggest a single relay integrated circuit that automatically switches an interface of the device in which it is contained between USB and audio output modes, as required by claim 1” .**

With regard to Wright's disclosure, in Column 3 Lines 31-39, Wright states “the circuit 100 may be implemented as any appropriate transceiver circuit (or device) where an analog signal and a digital signal (or a first digital signal and a second digital signal) may be alternately directly coupled from one device to another device via a single interconnect (e.g., a 4-conductor interconnect, a 5-conductor interconnect, and/or 4 conductors of any multi-conductor interconnect). The circuit 100 may be implemented such that USB (or USB OTG) and audio signals share conductors.” The examiner asserts that a single relay integrated circuit reads on “any appropriate transceiver circuit (or device)”.

Furthermore with regard to Wright's disclosure, in Column 7 Lines 7-8, “The circuit 150' may be implemented similarly to the circuit 150” where in Column 5 Lines 39-40, “The circuit (or device) 150 may be implemented as a multiplexer circuit”. Wright further states in Column 7 Lines 18-22, “The circuit 150' may be configured to present (i) the signal AUDIO\_IN via the I/O 134' during the first mode of operation of the circuit 100 and (ii) the signal VBUS via the I/O 134' during the second mode of operation in response to the signal CONTROL”. A 2 signal to 1 signal multiplexer as described

above by Wright in this particular embodiment can be implemented using as a single relay integrated circuit claimed by the applicant. This further reinforces that a single relay integrated circuit would be conceived by one of ordinary skill in the art at the time of invention to be an appropriate transceiver circuit.

### ***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhad Ali whose telephone number is (571) 270-1920. The examiner can normally be reached on Monday thru Friday, 7:30am to 5:00pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey C. Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

F.A.

  
JEFFREY PWU  
SUPERVISORY PATENT EXAMINER